

**Broadcasting Board of Governors**

**FY 2013 Strategic Sustainability Performance Plan**

**June 18, 2013**

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**BROADCASTING BOARD OF GOVERNORS**  
**INTERNATIONAL BROADCASTING BUREAU**

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June 18, 2013

SUBJECT: Policy and Strategy for Implementing EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, October 5, 2009

The mission of the Broadcasting Board of Governors (BBG) is to inform, engage and connect people around the world in support of freedom and democracy. The BBG is an independent federal government agency that manages and oversees all U.S. civilian international broadcasting. The agency's broadcasters distribute programming in 61 languages to an estimated weekly audience of more than 175 million people in over 100 countries.

As an agency of the federal government, the BBG is committed to complying with environmental and energy statutes, regulations, and executive orders (EOs). In addition, the agency is committed to developing a better understanding of the effects of climate change, and addressing climate change adaptation.

In keeping with this commitment, the BBG has prepared an executive summary highlighting the challenges faced by the agency and the successes achieved by the agency in implementing its Strategic Sustainability Performance Plan. The executive summary also highlights the agency's plans for strategic sustainability for FY 2014. Though a small agency, we will continue to explore and implement various strategies over the next several years that, if successful, will improve the agency's energy posture and enable it to better meet the challenging goals established by EO 13514.

Sincerely,



Mark Filipek  
Director, Operations & Stations Division  
Office of Technology, Services and Innovation  
Senior Sustainability Officer

## Executive Summary

The Broadcasting Board of Governors (BBG) is an independent Federal government agency that manages and oversees all U.S. civilian international broadcasting. The agency's broadcasters distribute programming in 61 languages to an estimated weekly audience of more than 175 million people in over 100 countries.

**A. Leadership** - The BBG consists of Federal and non-Federal elements. The Federal element includes the International Broadcasting Bureau (IBB) with its broadcasting organizations, the Voice of America and the Office of Cuba Broadcasting. The agency uses a decentralized approach to integrate energy management into its policy, planning, and budget processes. For this reason, the agency has not assigned specific individuals to an agency energy team; however, the agency's Strategic Sustainability Performance Plan identifies staff responsibilities for implementing the various aspects of its energy management program. The following are key staff positions involved in this process:

- Within the IBB, the *Office of Technology, Services and Innovation (TSI)* provides engineering and technological support to the agency's staff in Washington, DC, as well as, to its domestic and overseas offices and facilities, and manages a global network of over 90 transmitting sites delivering shortwave, medium wave (AM), FM, and TV broadcasts. TSI is also responsible for coordinating BBG's strategic sustainability planning effort.
- Within TSI, the *Director, Operations & Stations Division (T/EOS)* is responsible for the day to day operations of the agency's Transmitting Station Network, which is the agency's largest user of electricity. For this reason, the T/EOS Director provides overall guidance and direction for the agency's energy management program and serves as the agency's *Senior Sustainability Officer (SSO)*. In order to accomplish this large endeavor, the agency also tasked its senior managers to assist the SSO in implementing various portions of this plan.
- Within TSI, the *Director, Information Technology Directorate (T/I)* is the agency lead for *Electronic Stewardship and Data Centers*.
- *Chief Financial Officer, Office of the Chief Financial Officer (CFO)* is the agency lead for *Federal Employee Business Travel*.
- *Director, Office of Human Resources (OHR)* is the agency lead for *Federal Employee Commuting*.
- *Director, Office of Contracts (CON)* is the agency lead for *Sustainable Acquisition*.

**B. Evaluation Measures** - Each agency lead is responsible for developing a process to capture the information necessary for the agency to document its progress in meeting the established goal(s) for its portion of the Federal Energy Management Program (FEMP). The SSO, in conjunction with the responsible staff element, evaluates the agency's success in meeting its goals, and refines the process, if required, based on an assessment at the end of each fiscal year.

**C. Integration -** The agency's strategic plan and annual budgets address how the agency will accomplish its mission in the future and the costs involved in these efforts. These documents do not address "strategic sustainability" directly; however, some of the actions addressed in these documents will have a direct impact on the agency's future "strategic sustainability" profile. While these documents talk in terms of anticipated efficiencies and costs savings, it also is anticipated that a number of these actions will improve the agency's overall energy profile.

## **D. Challenges -**

**1. Realignment of the Broadcast Infrastructure:** Currently, the agency's major transmitting facilities, which transmit the agency's broadcasts, are located worldwide and are aging, and use large shortwave and/or medium wave (AM) radio transmitters. This technology, while critical to the agency's success in the past, no longer meets the challenge of broadcasting in the 21<sup>st</sup> Century. The following excerpt from the agency's strategic plan captures the direction in which the agency is now proceeding:

### ***"Strategy #5: Rationalize Program Delivery***

*Across the world, commercial, cable and satellite TV and FM radio stations continue to proliferate. TV remains by far the world's dominant medium for news and entertainment. The Internet continues to grow. Social media usage is increasing exponentially. Ownership of mobile phones has reached near saturation levels in even the poorest countries. It is essential that we reach audiences on their preferred media platforms. Yet the agency's distribution methods and means have not strategically tracked the shifts in media use. We must therefore align how we deliver our content with how consumers now access it. In the process, we must correct mismatches in resource allocations and redirect funds to support today's most effective distribution systems. This effort is to be research-driven but with close attention to intangibles such as the limitations in knowing in some countries how effective certain distribution methods are. Ultimately, the agency is platform-agnostic. We seek to do what works best for the market at hand to get our content to as many users as possible. Specifically, we will:*

- *Make pragmatic, research-based decisions on which shortwave and medium wave radio transmissions and facilities to continue, and which to draw down or close.*
- *Reallocate resources from selected, less effective cross-border transmissions to support new initiatives in more popular media.*
- *Increase direct-to-home satellite distribution of video and audio content.*
- *Expand local distribution through affiliation with strong local television and FM radio stations and, where possible, installation of FM transmitters.*
- *Use online and mobile distribution to enhance and complement broadcast media, reaching new audiences and building stronger connections with listeners and viewers of our radio and television broadcasts."*

In light of the above, the agency is making wholesale changes in how it distributes its content. In the future, it will use shortwave to broadcast to the half-dozen or so countries where it makes sense to do so, but the agency "will sharply draw down our shortwave capacity to reallocate the resources to the new platforms our audiences are using." In support of this effort, the agency plans on making "pragmatic, research-based decisions on which shortwave and medium wave radio transmissions and facilities to continue, and which to draw down or close." The resources saved through this effort will be used to support the more effective broadcast platforms.

In support of this transition, the agency's FY 2014 Budget *"continues the evolution away from shortwave to other platforms that are preferred by audiences around the world, including satellite and Internet radio, mobile phone technologies, and Internet-based social media. The BBG will continue shortwave broadcasts to areas that lack access to digital technologies..."* The agency's proposed actions as expressed in the FY 2014 Budget *"will not eliminate shortwave; rather, it will restructure and evolve the BBG shortwave distribution network to leverage the use of stations with the lowest operating costs and maintain adequate shortwave service to high priority target areas where shortwave transmissions will continue to be important to satisfy agency mission requirements."*

In this fluid environment, it will take some time to determine which transmitting facilities will remain operational for the foreseeable future and which enhancements to the infrastructure are appropriate to improve their strategic sustainability. At this time, developing a realistic plan to achieve strategic sustainability is difficult and will remain difficult until the full extent of the realignment of the transmitting facilities is known. Once this information becomes available, the strategic sustainability planners will be able to focus on improving those facilities that will remain active in the transmitting network.

## **2. Other Infrastructure Issues:**

As stated earlier, the agency has an aging infrastructure that needs to be maintained, even though many of these facilities are being considered for reduced missions or closure in the future. In an effort to determine what improvements can be made at each facility, and then, based on the cost to make the improvements and the status of the facility, what improvements should be made, the agency initiated a program to evaluate its domestic transmitting facilities to determine their compliance with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*. The initial evaluation was conducted by an architectural and engineering (A&E) firm at our Greenville Transmitting Station located in North Carolina. The A&E firm concluded that the station cannot be brought into 100% compliance with these Guiding Principles due to the age of the facility and the amount of funds that would be required to obtain this objective.

In the same light, the agency is not on track to reach the goal for potable water use reductions, as we remain very consistent in the amount of potable water we use each year. In the case of the Greenville Transmitting Station, some of the problems with reducing its potable water use are infrastructure driven. During its evaluation of the station, the A&E firm noted that Greenville will have difficulty in reducing its potable water usage because its potable water line has to be "flushed" on a regular basis to maintain adequate chlorine levels to ensure employee safety.

**3. Funding:** Funding for maintenance & repair projects at the transmitting stations, which affects strategic sustainability, has been limited for a number of years. The need for this funding was addressed in the agency's FY 2014 budget request... *"As the BBG has consolidated and streamlined its radio transmitting facilities worldwide, the need to keep the remaining network in prime operating condition has become even more critical. Infrastructure in remote locations that are exposed to extreme and corrosive environments requires costly upkeep to prevent failure. It is essential that BBG maintenance and repair funding keep pace with infrastructure needs to avoid broadcasting interruptions. Foregone investment in this infrastructure has left essential equipment in a critical state of disrepair."* To compound matters, this area took a major "hit" in FY 2013 when the high winds from two major storms destroyed five large antennas at the Sri Lanka Transmitting Station. Rebuilding these antennas will take several years and cost several million dollars. Because of this, only high priority M&R actions are being undertaken elsewhere.

#### **4. Business Travel:**

The Broadcasting Board of Governors (BBG) supports United States national interests through our mission to inform, engage and connect people around the world in support of freedom and democracy. In accordance with the International Broadcasting Act of 1994 (as amended), we manage and oversee all U.S. civilian international broadcasting, including the Voice of America (VOA), the Office of Cuba Broadcasting (OCB), and grantee organizations Radio Free Europe/Radio Liberty, Inc., Radio Free Asia (RFA), and the Middle East Broadcasting Networks, Inc. (MBN). Because of the agency's vast operations, both air and ground travel by employees is essential.

The BBG works to serve as an example of a free and professional press, reaching a worldwide audience with news, information, and relevant discussions. We work with a network of reporters and correspondents around the world. To be effective, coverage of these stories cannot focus solely on the Washington, DC area or other locations of the headquarters for VOA, RFE/RL, RFA, OCB, or MBN. BBG reporters must be able to travel to bring to its audiences the color and unique flavor of communities across the United States and the world. BBG support staff from offices such as marketing, IT, engineering, and telecommunications has a need for travel as well to ensure the agency broadcasts run efficiently, effectively, and meets legislative mandates.

When appropriate for meeting its needs, the agency utilizes teleconferencing to reduce travel by employees and has installed state-of-the-art audio and video equipment at its Headquarters Building for this purpose. This equipment provides the ability for staff to meet with colleagues at other geographic locations without the need for extensive travel.

**E. Successes** - Although we are a relatively small agency, we continue to work at improving our energy and environmental sustainability posture, and our successes demonstrate our commitment to the strategic sustainability process. Some of the agency's achievements in FY 2012 and FY 2013 (to date) are listed below.

##### **1. Greenhouse Gas Emissions:**

Currently, the agency is on track to meet its overall goals for reducing both Scope 1&2 GHG and Scope 3 GHG emissions. For FY2012, the agency reduced its Total Scope 1&2 GHG emissions, subject to the GHG reduction target, by 3.2% when compared to FY 2011, and by 23% when compared to the FY 2008 baseline. The agency also reduced its Total Scope 3 GHG emissions, subject to the GHG reduction target, by 1.6% when compared to FY 2011, and by 12.5% when compared to the FY 2008 baseline.

Beginning in FY 2010, the agency installed energy-saving technology on many transmitters in the global network. The purpose of this project was to reduce the amount of electricity used by the large shortwave and medium wave transmitters at these broadcast facilities. This effort along with some other energy saving actions resulted in an 8% electricity reduction between FY 2010 and FY 2011, and a 5.2% reduction between FY 2011 and FY 2012.

**2. Sustainable Buildings:** An A&E firm conducted an energy audit at our Greenville Transmitting Station, which was the first audit of this type that the agency undertook since initiating strategic sustainability planning. As noted in the Challenges section of this summary, full compliance with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* is not obtainable at this point in time; however, the audit identified a number of actions that can be implemented that will move the station towards partial compliance. Some of the actions already completed by the station include the following:

- Low flow showerheads were installed in station's two shower units.
- A major sweep of the A-Site facility was conducted to remove and dispose of all chemical and potentially hazardous materials. Station has contacted hazmat vendors for the assessment and removal of controlled materials.
- Motion sensor lighting controls were installed in the four bathrooms within the transmitter building.
- Recyclable paper/can/bottle containers were distributed throughout the facility. In coordination with the local county recycling programs, the station has implemented a paper/can recycling program.

**3. Petroleum Reduction:** The agency is on track to meet its petroleum reduction goal for FY 2020. In addition, FY 2012 marks the first time the agency used an alternative fuel (E-85) in one of its vehicles.

#### **4. Water:**

The Sao Tome Transmitting Station, located off the coast of West Africa, replaced its buried copper water lines located throughout the site, which helped in repairing an extensive underground water leak. The site also installed water meters and valves on all station buildings, which will assist in the detection and repair of underground water leaks. In FY 2011, the station used 2,373,325 gallons of potable water due to an underground pipe leaking. As a result of this project, which was completed in FY 2012, the station saved 828,375 (34.9%) gallons of water and approximately \$6,363.89 in water costs from the previous fiscal year.

As water conservation efforts, the Sri Lanka Transmitting Station has been using ground water to irrigate local landscape, and the Philippines Transmitting Station has reduced the amount of non-potable water used at its Tinang Site by reducing the number of times it waters its lawn and landscaping.

#### **5. Employee Commuting:**

To support the Executive Order and further reduce our Greenhouse Gas (GHG) emissions, the BBG will continue to encourage use of mass transit by employees. The agency provides a transit subsidy for qualified employees at the highest pre-tax amount allowable, or up to \$240.00 per month. Seventy four percent of agency employees currently participate in the agency's transit subsidy program.

BBG continues to promote and expand its Telework Program, with 22% of employees now participating in the program. The agency has achieved significant progress in this area despite the limitations presented by our broadcasting mission, which requires employees' presence in the studio for broadcasts.

To decrease the number of cars on highways, the agency allows employees to work a compressed work schedule, which reduces the number of days each week that an employee must report to work. Currently 6% of agency employees work a compressed work schedule.

The agency also provides parking for 4% of its workforce who commute to work in carpools and provides bicycle racks for employees who pedal to work.

**6. Electronics Stewardship & Data Centers:** The following information highlights the tremendous strides that the agency has made in achieving its goals for this sustainability area:

*FY12 Accomplishments:*

- Outlook Email 2010 Deployment – Moved agency to cloud based email system, thus eliminating in-house servers.
- Migrated the CEF systems, Omneon Spectrums (Production and Master Control), Omneon Media Decks, and application systems to the Cisco Nexus network core – Allows for reduction in number of switches deployed.
- Migrated the DaletPlus system core in ICC (DaletPlus application servers, database servers, VMW infrastructure, and NetApp proxy storage) to the Cisco Nexus network core – Allows for reduction in number of switches deployed.
- Agency Cisco Core Upgrade: New Cisco switches have been deployed in the basement, VNC area, and second floor data centers within the Cohen building. New switches are cabled into the new Nexus core and users are being migrated from old switches to new switches at this time – Allows for reduction in number of switches deployed.
- Configured and deployed Catalyst 4510 switches to G746 and 2605 in support of the Agency migration from the legacy Catalyst 4006 switch equipment - – Allows for reduction in number of switches deployed.
- Migrated storage from the MAC XSAN to the Enterprise Storage system. Powered down and retired XSAN – Storage systems consolidation.
- Migrated storage from Vanburen and Harrison to the Enterprise Storage system. Powered down and retired Vanburen and Harrison – Storage system consolidation.
- Completed deployment of HP virtualization platform and migration of vm guest servers – will allow for further consolidation of application servers.
- Made substantial progress with consolidation of SQL and Oracle databases to a small number of highly available servers – will allow for further consolidation of application and database servers

*FY13 Accomplishments (to date)*

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- Started Windows 7 upgrade for VOA, which provided a more modern, reliable and secure operating system – New Operating system provides additional power saving options.
- Continued deployment of larger wide screen monitors – Replacing CRT monitors with LCD.
- Continued refresh of workstations, printers, and network devices for a number of VOA News Bureaus and IBB relay stations – Upgraded equipment with better power handling features.
- Began migration of Dalet audio production system from version 5.1e to Dalet Radio Suite HD. This will allow for a movement of all servers to virtualized platforms.
- Continued to make significant progress toward standing up the new Cisco Nexus network core – New switches have better energy consumption rates and will ultimately lead to fewer switches being deployed.
  - Installed Nexus equipment across three datacenters
  - Prepared to interconnect to the legacy core and start migrating the Agency network
- Continued migration of a number of end-user switches to faster, more energy efficient Cisco 4510 switches. This includes a migration in the VOA News Center which allowed IT to go from three switches to a single switch and wiring closet 1-9 which allowed for consolidation of two switched into a single switch..
- Did the initial install of 2 HP P4800s into 2 datacenters – Allows for server consolidation and future desktop virtualization.
- Retired and disposed of 35 servers through virtualization or consolidation of services.



- Migrated ListServ services over to Cloud based Outlook services, thus eliminating in-house servers.

## **F. Planned Actions for FY 2014 -**

### **1. Sustainable Buildings:**

If sufficient funds are available in FY 2014, the agency will conduct an assessment of its transmitting station located in the Commonwealth of Northern Mariana Islands to determine compliance with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*. The assessment will provide the agency with a list of potential strategies that the agency could implement to improve the site's sustainability performance.

A number of maintenance & repair projects are planned over the next several fiscal years, which if funded and implemented, will have a positive effect on our strategic sustainability posture.

**2. Motor Vehicles** - A portion of the agency's Broadcasting Administrative Manual (BAM) covering motor vehicles has been revised and is being staffed for final approval. Besides describing the procedures for purchasing or leasing, accounting for, and reporting on Agency-owned or -leased motor vehicles, it also documents the actions the agency must take to meet the requirements of the Federal Energy Management Program (FEMP) that relate to motor vehicles, to include the process the agency will follow to convert its current fleet to a fleet *"that is smaller, is more efficient, emits less GHG, and operates primarily on alternative fuels."*

**3. Metering** - In FY 2010, this agency re-evaluated its approach to metering and determined that it initially would focus on metering the large transmitters it uses for broadcasting, and then work on metering appropriate buildings at the transmitting sites. This approach recognizes the fact that the transmitting stations primarily exist to maintain and operate the large transmitters, and that these transmitters consume the large majority of the electricity used at the transmitting stations. Currently, 88.3% of the transmitters are metered with 90.4 % of the electricity used by the transmitters being metered. In FY 2014, there is an approved but yet to be funded maintenance and repair (M&R) project that will meter an additional eight transmitters. This project will bring the percentage of transmitters that are metered to 96.8% with 97.1% of the electricity used by the transmitters being metered.

**4. Energy** - If approved in the FY 2014 budget, the agency anticipates a reduction in its energy use as the budget submittal calls for a reduction in broadcast transmissions, and the closure of one small transmitting site.

**5. Aviation Fuel** - If approved in the FY 2014 budget, the agency anticipates a reduction in its use of aviation fuel as the budget submittal calls for the elimination of this delivery platform.

**6. Sustainable Acquisitions** – The agency does not have a formal process in place to address the requirements of sustainable acquisition. The Office of Contracts anticipates establishing this process by the end of 2014.

**7. Electronic Stewardship & Data Centers** – Some of the actions being planned for FY 2014 include:

- Identifying the "core" and "non-core" data that will be categorized as either "broadcasting" or "non-broadcasting".

- Movement of SharePoint out to the Microsoft Federal cloud, and the movement of the user's home drive to Microsoft SkyDrive Services.
- Continued virtualization of servers and migration of non-critical data to the cloud.
- Reduce energy usage by ensuring that all energy saving settings are employed, where appropriate, and stopping the deployment of individual desktop printers in favor of already deployed network printers and networked copiers that have printer capabilities.
- Ensuring that all IT purchases are 100% Energy Star qualified.

## **G. Progress on Administration Priorities -**

**1. Climate Change Adaption Plan:** One of the initial goals of the plan was to determine the impact, if any, climate change will have on the broadcast signal. In FY 2013, it was determined (in-house) that it would not have any significant impact on the broadcast signal.

**2. Fleet Management Plans:** The agency submitted its FY 2013 Fleet Management Plan through the Federal Automotive Statistical Tool (FAST). Currently, the agency is on track to meet its optimal fleet goal.